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     (FILE 'USPAT' ENTERED AT 08:14:54 ON 23 SEP 1997)
L1          1030 S ELASTIN
L2            37 S TROPOELASTIN
L3          3043 S CHROMOPHORE
L4         87379 S TISSUE#
L5        192235 S IRRADIATION OR RADIATION OR IRRADIATE OR RADIATE
L6        367038 S FUSE OR FUSING OR BOND OR BONDING OR FUSED OR BONDED
L7             0 S L2 AND L3 AND L4 AND L5 AND L6
L8            28 S L1 AND L3 AND L4 AND L5 AND L6
L9            11 S L2 AND L4 AND L5 AND L6
L10            0 S L2 (25A) L4 (25A) L5 (10A) L6
L11            0 S L1 (25A) L4 (25A) L5 (10A) L6
L12            0 S L2 (25A) L4 (25A) L6
L13            0 S L2 (25A) L4 (25A) L5
L14            1 S L2 (25A) L4
L15            0 S L2 (10A) L4
L16          338 S L1 (25A) L4
L17          179 S L1 (5A) L4
L18            2 S L17 (25A) (L5 OR L6)

     FILE 'JPOABS' ENTERED AT 08:34:56 ON 23 SEP 1997
L19            2 S ELATIN OR TROPOELASTIN
L20           87 S ELASTIN OR TROPOELASTIN

     FILE 'EPOABS' ENTERED AT 08:37:18 ON 23 SEP 1997
L21            3 S TROPOELASTIN

     FILE 'USPAT' ENTERED AT 08:38:50 ON 23 SEP 1997

=> d l14;d l14 hit;d l8 28, 27, 23;d l9 11,6

1.  5,428,014, Jun. 27, 1995, Transglutaminase cross-linkable
polypeptides and methods relating thereto; Virender Labroo, et al.,
514/12, 13, 14, 15, 16; 530/324, 326, 327, 328, 329, 345, 350 :IMAGE
AVAILABLE:


US PAT NO:     5,428,014 :IMAGE AVAILABLE:            L14: 1 of 1

SUMMARY:

BSUM(37)

 As noted above, within one embodiment of the invention, copolymers of a
first polypeptide monomer comprising a polypeptide that is cross-linkable
by a transglutaminase and a second polypeptide monomer comprising a
polypeptide capable of being nonenzymatically polymerized into soluble,
biocompatible, bioadhesive polymers are disclosed. Polypeptides suitable
for use as second polypeptide monomers can be derived from structural
proteins having desirable physical characteristics. Preferred physical
characteristics include the ability to bind tissue and the ability to
form fibers. Suitable proteins in this regard include elastin,
tropoelastin, collagen, silk, loricrin (Hohl et al., J. Biol. Chem.
266: 6626-6636, 1991), involucrin (Cell 46: 583-589, 1986 and Etoh et
al., Biochem. Biophys. Res. Comm. 136: 51-56, 1986) fibronectin (for
review see Yamada, Current Opinion in Cell Biology 1: 956-963, 1989;
Sekiguchi et al., Proc. Natl. Acad. Sci. USA 77: 2661-2665, 1980),
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thrombospondin (Zardi et al., EMBO J. 6: 2337-3342, 1987; Gutman and Kornblihtt, Proc. Natl. Acad. Sci. USA 84: 7179-7182, 1987). Certain proteins, such as involucrin, collagen and silk have repeat peptide sequences that can be used as second polypeptide monomers within the polymers of the present invention. Preferred polypeptides include elastomeric polypeptides disclosed by Urry and Okamoto (U.S. Pat. Nos. 4,132,746 and 4,187,852; which are incorporated by reference herein in their entirety), Urry (U.S. Pat. Nos. 4,474,851; 4,500,700; and 5,064,430; which are incorporated by reference herein in their entirety) and Urry and Prasad (U.S. Pat. Nos. 4,783,523 and 4,970,055; which are incorporated by reference herein in their entirety). In this regard, polypeptides of the formulas Val-Pro-Gly-Val-Gly (SEQ ID NO:5), Ala-Pro-Gly-Val-Gly (SEQ ID NO:6), Gly Val Gly Val Pro (SEQ ID NO: 14) and Val-Pro-Gly-Gly (SEQ ID NO:7) are preferred. As will be evident to one skilled in the art, the adhesiveness of the copolymers may be increased by the incorporation of adhesive sequences into the second polypeptide monomer. Adhesive sequences can be obtained from any protein containing tissue-binding domains and include integrin binding sequences such as Arg-Gly-Asp. The copolymers of the present invention may also include additional types of polypeptide monomers that confer desirable physical characteristics to the copolymer such as increased tissue adhesion, increased tensile strength and/or increased elasticity. Within one embodiment of the invention, the copolymers include 1-6 additional types of polypeptide monomers. Such additional polypeptide monomers are different than the first and second polypeptide monomers, although they may confer similar characteristics.

28. 4,060,081, Nov. 29, 1977, Multilayer membrane useful as synthetic skin; Ioannis V. Yannas, et al., 602/49; 128/DIG.8; 424/444; 602/50, 58; 623/1, 2, 11, 25, 66 :IMAGE AVAILABLE:

27. 4,280,954, Jul. 28, 1981, Crosslinked collagen-mucopolysaccharide composite materials; Ioannis V. Yannas, et al., 530/356, 395; 606/229 :IMAGE AVAILABLE:

23. 5,292,362, Mar. 8, 1994, **Tissue bonding** and sealing composition and method of using the same; Lawrence S. Bass, et al., 106/173.01, 174.1, 181.1, 287.2, 287.21, 287.35; 427/2.24; 514/773, 776; 606/214 :IMAGE AVAILABLE:

11. 4,474,851, Oct. 2, 1984, Elastomeric composite material comprising a polypeptide; Dan W. Urry, 428/373, 374, 394, 395; 930/10 :IMAGE AVAILABLE:

6. 4,898,926, Feb. 6, 1990, Bioelastomer containing tetra/penta-peptide units; Dan W. Urry, 528/328; 204/403; 528/184, 327 :IMAGE AVAILABLE:

L28 ANSWER 1 OF 15 INPADOC COPYRIGHT 1997 EPO
AN 26747072 INPADOC UW 9736 UP 970913 EW 9736 ED 970913
TI ELASTIN, AND ELASTIN-BASED BIOMATERIALS AND PROCESS.
IN GREGORY, KENTON, W.; GRUNKEMEIER, JOHN
INS GREGORY KENTON W; GRUNKEMEIER JOHN
INA US
PA SISTERS OF PROVIDENCE IN OREGON; GREGORY, KENTON W.
PAS SISTERS OF PROVIDENCE IN OREGO; GREGORY KENTON W
PAA US
LA English
TL English; French; German
DT Patent
PIT EPA1 PUBL. OF APPLICATION WITH SEARCH REPORT
PI EP 792125 A1 970903
DS R AT; R BE; R CH; R DE; R DK; R ES; R FR; R GB; R GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE
AI EP 95-944462 A 950404
PRAI WO 95-US4236 W 950404 EWPR 9632 EDPR 960817
US 94-341881 A 941115 EWPR 9623 EDPR 960615

L28 ANSWER 2 OF 15 INPADOC COPYRIGHT 1997 EPO
AN 25081274 INPADOC UW 9645 UP 961116 EW 9623 ED 960615
TI ELASTIN, AND ELASTIN-BASED BIOMATERIALS AND PROCESS. ELASTIN, AND ELASTIN-BASED BIOMATERIALS AND PROCESS.
IN GREGORY, KENTON, W.; GRUNKEMEIER, JOHN
INS GREGORY KENTON W; GRUNKEMEIER JOHN
INA US
PA SISTERS OF PROVIDENCE IN OREGON; GREGORY, KENTON, W.
PAS SISTERS OF PROVIDENCE IN OREGO; GREGORY KENTON W
PAA US
LA English
TL English; French
DT Patent
PIT WOA1 PUBL.OF THE INT.APPL. WITH INT.SEARCH REPORT
PI WO 9614807 A1 960523 100000
DS W AU; W BR; W CA; W CN; W JP; W KR; W MX; W SG
RW AT; RW BE; RW CH; RW DE; RW DK; RW ES; RW FR; RW GB; RW GR; RW IE; RW IT; RW LU; RW MC; RW NL; RW PT; RW SE
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